CLAIMS

1. A method of detecting the angular position of the rotor of an electrical machine (4) which is coupled in rotation without slip to an internal combustion engine (7) that is fitted with a sensor (8) delivering a first signal representative of the angular position of the engine at speeds of rotation that are greater than a minimum measurement speed (V_M), the method being characterized

· in that, on the basis of at least one characteristic of the electrical machine, a second signal is generated that is representative of an estimated angular position of the rotor of the electrical machine for speeds of rotation that are less than a maximum estimation speed (V_A), said estimation speed being equal to or greater than the minimum measurement speed (V_M);

· in that, as a function of an estimated speed of rotation, there is delivered to means for controlling the electrical machine:

· the second signal whenever the estimated speed of rotation is below a first threshold (S1) greater than or equal to the minimum measurement speed (V_M); or

· the first signal whenever the estimated speed of rotation is greater than a second threshold (S2) greater than or equal to the first threshold but less than or equal to the maximum estimation speed (V_A);

and in that a changeover from the second signal to the first signal, and vice versa, is performed at an estimated speed of rotation lying between the first threshold and the second threshold.

2. A method according to claim 1, characterized in that during an increase in the speed of rotation while the second signal is being delivered, a changeover from the second signal to the first signal is performed when the estimated speed of rotation reaches the second threshold, and in that, during a decrease in the speed of rotation

while the first signal is being delivered, a changeover from the first signal to the second signal is performed when the estimated speed of rotation reaches the first threshold.

3. A method according to claim 2, characterized in that the second threshold (S2) is less than the idling speed of the internal combustion engine.

4. A method according to claim 1, characterized in that the estimated speed of rotation is determined on the basis of at least one electrical characteristic of the electrical machine.

5. A method according to claim 1, characterized in that the estimated speed of rotation is determined by timer means (14) triggerable when the engine (5) is started.

6. A method according to claim 1, characterized in that the first threshold (S1) is equal to 500 rpm and the second threshold (S2) is equal to 700 rpm.